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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,210

Applicant(s)

HASE, PAUL VON

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-19-01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Application has been examined. The claims 1-35 are pending. The examination results are as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-17, 19-20, 25-28 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by West (WO 98/25401 cited by Applicant).

Regarding claims 1-4, 6-7 and 19-20, West discloses a method for correcting the phase different between the pixel clock (34, 36, figure 2, page 7, lines 28) of a graphics card and the sampling clock (page 2, lines 28 to page 3, line 5) of a flat-panel display with an analog interface in a system comprising flat-panel display, graphics card and computer (see abstract), therefore, characterized in that automatic adjustment of the phase difference is performed repeatedly (see figures 2, 4 and 6b).

Regarding claims 5, and 26, West discloses a sufficiently bright pixel is selected and the rising edge of a video pulse of this pixel is determined (see figure 4, LEFT REG and RIGHT REG, page 14 line 1), in that a sufficiently bright pixel is selected and the falling edge of a video pulse of this pixel is determined (see figure 4, LEFT REG and RIGHT REG, page 13, lines 21-24), and that the phase difference is adjusted such that the sample moment for the total image is

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approximately midway between the rising and falling edges of the video pulse (see page 15, lines 10-28).

Regarding claim 8, West discloses the image region with the pixel are arranged on the flat screen in rows and columns between a back porch region and a front porch region (see page 2, lines 11-27, see figure 1d), a pixel in the first image column adjacent the back porch region (see figure 4, LEFT REG and RIGHT REG, page 14, line 1) being selected as a sufficiently bright pixel for determining the rising edge and a pixel in the first image column adjacent the front porch region being selected as a sufficiently bright pixel for determining the falling edge (see figure 4, LEFT REG and RIGHT REG, page 13, lines 21-24).

Regarding claim 9, West discloses an inherent the brightness of a plurality of image, as pots of first column is measure.

Regarding claims 11-12 and 31-32, West discloses a method and arrangement (see figures 2 and 4) for shifting the phase difference (18, see figure 2, page 16, lines 23-27) I order to determine the amplitude value or sample value (202, 203, see figure 7, lines) of the selected pixel until either the measured amplitude values or sample values (see figure 4, THRESRGEm PIXCOMP, see age 16, line 23-topage 17, lines 17); or the measured amplitude values or sample values are below a predetermined limit value (see lie below a threshold, see figure 4, THRESREG, PIXCOMP, see page 17, lines 18-27), the phase difference being shifted by half a pixel width (see page 17, lines 12-15, and see selecting a frame at a center of a subseries, see lines 23-25).

Regarding claims 13-14 and 33-34, West discloses a method and an arrangement (see figure 2 and 4, wherein to determine the rising/falling edge, the phase difference is shifted in the

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direction of the back porch region or front porch (18, "PROGRAMMABLE DELAY, see figure 2, page 16, lines 23-27; both "directions" are possible, page 17, lines 25-27) until measured amplitude value (202, 203, see figure 7) drops to a predetermined % (see lies below a threshold, see figure 4, "THRESREG", "PLXCOMP", see page 17, lines 18-27, see "the right hand most active pixel component", this value of the phase difference is buffered as the location of the rising/falling edge (see page 17, lines 12-15 and 23-25).

Regarding claims 15-17, West discloses an inherent the phase or sampling instant is delayed to the midpoint between the rising and falling edges by a predetermined amount (see selecting a frame at a center of a subseries, see page 17, lines 23-25).

Regarding claims 25-28, West discloses the phase adjustment necessary for instantaneous condition of the system is determined only at individual image spots, and by which the determined phase adjustment is then applied to the entire image (see page 15, lines 23-28), or by an adjusting device with which the phase is adjusted such that the sampling instant is shifted by approximately half the width of an image spot toward the center of the pixel (see page 15, lines 10-28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 18, 21-24 and 29-30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over West (WO 98/25401 cited by Applicant) in view of Hirao et al. (US 4,996,596).

West does not disclose the sampling instant can be changed by the user compared with the value determined during matching in case an offset adjusted, and an adjusting device for shifting the phase comprising a circuit containing two PLL circuits, whose outputs can be adjusted independently of one another as regards their phase. Hirao discloses a circuit for providing the phase comparator (16) to compare the phase of the horizontal synchronization signal from synchronization separating circuit (14, see column 8, lines 45-49), and two PLL loop (first PLL loop and second PLL loop, whose outputs independently to each other (see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teaching of using the phase comparator, first PLL loop and second PLL loop as taught by Hirao into the adjusting device of West having sampling clock because this would for responding to a single output in a synchronization detector circuit (see abstract).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D. C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

Kimnhung Nguyen
March 1, 2004

Lun-Yi Lao
Primary Examiner

